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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/502,413	04/22/2005	Markus Heiniger	0115-044678	3963

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EXAMINER

LEE, BENNY T

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 07/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/502,413	HEINIGER ET AL.	
	Examiner	Art Unit	
	Benny Lee	2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-36; 37-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 July 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>23 July 2004</u> . | 6) <input type="checkbox"/> Other: _____ |

The disclosure is objected to because of the following informalities: Paragraphs [0001] & [0011], note that reference to “claim 1” and “claim 17” would be inappropriate, especially since these claims have been already canceled. Paragraph [0003], note that “... equipping the base stations” should be rephrased as --...equipping base stations--. Paragraphs [0007] & [0008], note that the reference labels associated with the corresponding prior art U.S. patent documents should be deleted as being inappropriate (unless they are depicted by a drawing figure in the present disclosure). Paragraph [0017], note that “Particular” should be rephrased as --A particular--. Paragraph [0026], note that “arranged in the antenna array $2n+1$...,” appears to be an incomplete recitation which needs clarification. Paragraph [0037], note that --9-- should precede “B”. Note that the heading “WAYS OF IMPLEMENTING THE INVENTION” should be rephrased as --DETAIL DESCRIPTION OF THE PREFERRED EMBODIMENTS--. Paragraph [0043], note that the last sentence in that paragraph should reference --Figure 2-- for clarity of description. Paragraph [0044], note that “lugs 25, 26” should reference --Fig. 2-- in which they appear. Paragraph [0045], note that the first two sentences of this paragraph should reference --Figure 8-- for clarity of description. Paragraphs [0057] & [0058], note that the terms in each equation need to be explicitly defined for clarity of description. Appropriate correction is required.

The disclosure is objected to because of the following informalities: Note that at all appropriate occurrences through out the specification, inclusive sets of reference labels should include all reference labels in the inclusive set when they are first recited as to be consistent with the labeling in the corresponding drawing figure. For example, for the first occurrence of “106, ..., 114” should be rephrased as --106, 107, 108, 109, 110, 111, 112, 113, 114-- as to be

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consistent with the labeling in “Fig. 10”. Likewise, other first occurrences of inclusive sets of reference labels should be similarly presented. Note that at all occurrences through out the specification, the recitation of a reference number follow by a sequence of alphabet designators should be rewritten to include the reference number associated with each alphabet designator for consistency with the corresponding drawing figure. For example, “106 a, b” should be rewritten as --106a, 106b-- at each occurrence, “91a, b ..., 98a, b” should be rewritten as --91a, 91b, ... 98a, 98b--, and the like for consistency with the corresponding drawing figure. In general, applicants’ should review the specification description to make sure that each reference label in each drawing figure has a corresponding description in the specification. Appropriate correction is required.

The drawings are objected to because of the following: In fig. 1, note that reference labels --81-- & --82-- need to be respectively provided as to be consistent with the specification description of “Fig. 1”; In Fig. 6, note that “6f” should properly be --66f--. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be

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labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claims 21-36; 37-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 21, 37, note that it is unclear how “by means of a dielectric” relates to the subsequent recitation of “a common displaceable dielectric” (i.e. same as, different from, etc). Clarification is needed.

In claims 23, 27, 29, 36, note that it is unclear with respect to which ones of the above recited dielectrics is intended by the recitation of “the dielectric”. Clarification is needed.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 21, 22, 31, 32, 36 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Xu.

Xu (fig. 1) discloses a phase shifter for providing pivoting (i.e. beam tilting) of a signal beam radiated through radiators (having corresponding polarizations) in an antenna array. The phase shifter comprises a pair of parallel symmetrically oriented (i.e. along a longitudinal axis)

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microstrip lines (e.g. 3) disposed on a insulating substrate or printed circuit board (2), as best seen in Fig. 2. as evident from fig. 1, a dielectric plate (4) is provided over the pair of parallel microstrip lines and is displaceable over the microstrip line to provide a respective phase shift in each one of the microstrip lines. Note that by virtue of the symmetric orientation of the parallel microstrip lines, a respective increase in phase of one of the microstrip line pair results in a corresponding decrease (i.e. by the same amount of) in the phase of the other of the microstrip line pair, thereby effecting the beam tilt of the antenna array.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sledkov and Chang et al both pertain to phase shifters having movable dielectrics disposed over microstrip phase shift lines.

Any inquiry concerning this communication should be directed to Benny Lee at telephone number 571 272 1764.

B. Lee



BENNY T. LEE
PRIMARY EXAMINER
ART UNIT 2817